In the Claims

1-8. (Canceled)

9. (Currently Amended) A method of routing information packets over a label switched path<u>s</u> in a communications multi-service network comprising<s>;</s> a plurality of nodes interconnected via quality of service capable tunnels <u>each having an allocated resource capacity</u> and incorporating a frame-mode label switched (MPLS) architecture, wherein end-to-end communications having a predetermined quality of service are provided by<u>:</u>

<u>establishing said tunnels as first level label switched path sections, identified by first level labels;</u>

defining at the network edge a label stack of <s>first, second and third labels for delivering packets through a</s> <u>at least a said first level label and a second level label,</u> <u>said label stack defining a concatenated</u> sequence of said tunnels <s>defined by the label stack;</s> <u>and</u>

<u>routing said information packets over said concatenated sequence of said tunnels using said label stack</u>.

10. (Currently amended) A method as claimed in claim 9, <s>wherein said tunnels are established as label switched path sections incorporated in dynamic multiplexed label-switched paths comprising first stage and second stage Layer 1 constraint based routed label-switched paths</s> <u>comprising:</u>

<u>establishing a dynamic multiplexed label switched path, identified by said second level label, said dynamic multiplexed label switched path comprising first level label switched path sections corresponding to said concatenated sequence of said tunnels.</u>

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11. (Currently Amended) A method as claimed in claim 10, wherein information packets for a new session is are multiplexed onto a said dynamic multiplexed label switched path only if the available resource constraints capacity of the first stage and second stage constraint based routed said concatenated sequence of tunnels is sufficient.

12. (Currently Amended) A method as claimed in claim 9 11, wherein the available resource availability capacity of the second stage constraint based routed tunnels corresponding to said label switched paths sections is advertised periodically to the network edge first stage constraint based routed switched paths, and wherein the available resource availability capacity is used to determine path selection.

13. (Canceled)

14. (Canceled)

15. (Currently Amended) A method as claimed in claim 14 11, wherein a session established on routed over a said dynamic multiplexed constraint based label switched path is identified by the a third-layer level label in said label stack.

16. (Currently Amended) A method as claimed in claim 15, wherein a bandwidth allocation mechanism is used to pre-allocate, on a predictive or as needed basis, resource capacity within the second stage Layer 1 constraint based routed tunnels corresponding to the first level label switched paths sections such that dynamic multiplexed label switched path selection is deterministic.

17. (Currently Amended) A communications multi-service network comprising; a plurality of nodes interconnected via quality of service capable tunnels each having an allocated resource capacity and incorporating a frame-mode label switched

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(MPLS) architecture, wherein end-to-end communications having a predetermined quality of service are provided by:

establishing said tunnels as first level label switched path sections, identified by first level labels;

defining at the network edge a label stack of ~~first, second and third labels for delivering packets through a~~ at least a said first level label and a second level label, said label stack defining a concatenated sequence of said tunnels for routing information packets ~~defined by the label stack~~.

18. (Currently Amended)   A communications multi-service network incorporating a ~~plurality of~~ dynamic multiplexed ~~constraint-based~~ label switched paths identified by said second level label, said dynamic multiplexed label switched path comprising first level label switched path sections corresponding to said concatenated sequence of said tunnels ~~defining quality of service capable tunnels, each said path comprising a second-layer constraint-based label-switched-paths constrained within two first-layer constraint-based label-switched paths~~.

19. (Currently Amended) A communications network as claimed in claim 18, wherein ~~a~~ said dynamic multiplexed ~~constraint-based~~ label switched path ~~has no explicit traffic contact but~~ is constrained entirely by the ~~of its first layer paths~~ allocated capacity of said concatenated sequence of said tunnels.

20. (Currently Amended) A communications network as claimed in claim 18, wherein information packets for a new session ~~is~~ are capable of being multiplexed onto ~~a~~ said dynamic multiplexed label switched path only if the available resource ~~constraints~~ capacity of ~~the first stage and second stage constraint based routed~~ said concatenated sequence of said tunnels is sufficient.

21. (Currently Amended)   A communications network as claimed in claim ~~20~~ 17, wherein ~~the~~ available resource ~~availability~~ capacity of ~~the second stage constraint~~

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based routed tunnels corresponding to said label switched paths sections is advertised periodically to the network edge first-stage constraint-based routed switched paths, and wherein the available resource availability capacity is used to determine path selection.

22-23. (Canceled)

24. (Currently Amended) A communications network as claimed in claim 23 18, wherein a session established on a said dynamic multiplexed constraint-based label switched path is identified by the a third layer level label in said label stack.

25. (Currently Amended) A communications network as claimed in claim 24 18, wherein a bandwidth allocation mechanism is used to pre-allocate, on a predictive or as needed basis, resource capacity within the second stage Layer 1 constraint based routed tunnels corresponding to the first level label switched paths sections such that dynamic multiplexed label switched path selection is deterministic.

26. (New)   A method according to claim 10, wherein the dynamic multiplexed label switched paths have no allocated resource capacity.

27. (New)   A communications network according to claim 18, wherein the dynamic multiplexed label switched paths have no allocated resource capacity.

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